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Water Quality Concerns After a Wildfire

During the fire, rapid and extreme increases in temperature can lower water levels, destroy vegetation and soil layers, and dislodge well construction materials or damage casing. Without the vegetation to protect the soil, runoff and erosion can create changes to water quality and quantity. And, if the well head is damaged, this could allow surface waters into your well. In addition, fire suppressant compounds (i.e. red slurry) that are dropped onto wildfires are another concern for drinking water sources.

Soil, which influences water infiltration and runoff, can be significantly changed for a few years following wildfires. Most effects come from added sediments and debris to surface water. In some cases, these physical effects can reroute streams where other chemical and biological conditions can linger. So it is important to test your water initially following a fire, annually, and if any water quality changes are noticed in between time.

Conditions at the Well

When you are able to return home, check the conditions at the well. All pumps and their electrical components can be damaged by sediment and other debris. DO NOT turn on the power to the pump. If the pump is not properly cleaned prior to being powered it can burn out. Check that the wellhead is still intact, tightly capped, and that no debris is near it. If the wellhead is damaged, temporarily secure a plastic bag over the remaining pipe until a well professional can fully inspect the well and electrical systems. Once the well has been repaired, have the water tested. If the wellhead does not have any signs of damage, have the well inspected, including electrical system and water level, and the water tested before using the water.

Testing the Water

Wildfires can have an effect on water quality. Most effects come from added sediments and debris to the surface soil and water. Water quality typically returns to pre-burn levels within one or two years, as fresh water entering the atmosphere over time helps clean and dilute most pollution. You should have your water tested initially after any repairs are made, annually, and if any changes to the water quality are noticed. Water quality concerns after a wildfire include: calcium and magnesium (or total hardness), chloride, nitrate, pH, phosphorus, sodium, sulfates, total dissolved solids, turbidity, and cyanide.

Low Water Levels

Extreme weather conditions and emergencies, including wildfires, can cause low water levels. Pumping too much water from a well or pumping it too fast can also cause low water levels. This is particularly important in times of drought and low rainfall. Knowing the exact yield of your well is critical to managing the use of water. If you don't have this information, contact your well professional for assistance.

If you have a low yielding well, you should be very careful how much demand you place on it. Try to limit the demand on your well by spreading out your daily and weekly water-use activities, such as bathing, watering the garden and washing clothes and dishes. Take the time to repair dripping faucets or leaking toilets. Invest in water efficient appliances and fixtures. These small measures can save thousands of gallons of water and help get your family through a dry spell.

For more tips on coping with low water levels visit www.watersystemscouncil.org/infoSheets.php or contact your local well professional today for options such as adding additional water storage or deepening your well.

WSC has over 80 different wellcare®information sheets that can help you and your family learn more about managing a water well and protecting your water supply. Visit www.wellcarehotline.org or contact the wellcare® Hotline at 888-395-1033.